SF FILE NUMBER
5-3.15

7107

RICHARDSON FLAT

RI/FS PRIORITIZATION BRIEFING

LOCATION: RICHARDSON FLAT IS LOCATED ABOUT 3 MILES NE OF PARK CITY, ABOUT 1.5 MILE OF PROSPECTOR SQUARE (A SUB-DIVISION OF PARK CITY) IN SUMMIT COUNTY, UTAH. THE AREA IS NOTED FOR ITS WINTER SKIING AT WHICH TIME THE POPULATION OF PARK CITY INCREASES FROM 5,000 TO OVER 10,000. THE SKI RUNS ARE LOCATED WITHIN 2 MILES OF THE SITE.

SITE DESCRIPTION: THE SITE LIES WITHIN A SMALL FLAT, TOPOGRAPHIC BASIN AMONG THE UINTA MOUNTAINS NEAR THE INTERSECTION WITH THE WASATCH MOUNTAINS AND COVERS APPROXIMATELY 160 ACRES. SMALL, INTERMITTENT MOUNTAIN STREAMS CONVERGE ON THE SITE BEFORE ENTERING SILVER CREEK, APPROXIMATELY 500 FEET NORTHWEST OF THE SITE.

SITE HISTORY: MILL TAILINGS AT RICHARDSON FLAT CAME FROM WASTE ROCK OF CRUSHED ORE WHICH ORIGINATED FROM LOCAL AREA MINES. TAILINGS WERE DEPOSITED IN THE FORM OF SLURRY. TWO DISTINCT TIME PERIODS OF MILLING AND TAILINGS DEPOSITION CAN BE IDENTIFIED (1) EARLY MINING DAYS OF THE PARK CITY AREA, FOR WHICH NOT MUCH IS KNOWN, AND (2) MAY 1975 TO AUGUST 1981 WHEN THE SITE WAS USED BY UNITED PARK CITY MINES. THE TAILINGS ON SITE RANGE IN THICKNESS FROM 0-10 FEET.

DEMOGRAHPICS AND LAND USE: THE SITE LIES IN A RURAL AREA WITH VERY WIDELY SCATTERED RESIDENCES. THERE ARE ONLY 3 RESIDENCES WITHIN ONE MILE RADIUS OF THE SITE. HOWEVER, SINCE THE SITE LIES CLOSE TO A POPULAR SKI RESORT, FUTURE DEVELOPMENT OF THE AREA MAY INCREASE RESIDENTIAL, COMMERCIAL AND RECREATIONAL LAND USES.

CONTAMINANTS OF CONCERN

- ARSENIC
- CADMIUM
- LEAD

GROUNDWATER 1986

CONTAMINANT	MAXIMUM CONCENTRATION (REPORTED AS PARTS PER BILLION [PPB]		
	OFF-SITE UPGRADIENT	ON-SITE	MCL (PPB)
ARSENIC	<5	349	50
CADMIUM	<5	48	10
CHROMIUM	<5	104	50
LEAD	<30	1,080	50
MANGANESE	20	10,400	50

THE GROUNDWATER AQUIFER [illegible] IS CLASSIFIED BY THE STATE OF UTAH. THE CLASSIFICATION MEANS THAT AQUIFER CAN BE USED AS A DRINKING WATER SOURCE.

SURFACE WATER 1986

CONTAMINANT	MAXIMUM CONCENTRATION (REPORTED AS PARTS PER BILLION [PPB])	
	UPSTREAM SILVER CREEK	DOWNSTREAM SILVER CREEK
ARSENIC	14	65
COPPER	12	60
LEAD	147	1,985

SILVER CREEK IS CLASSIFIED BY THE STATE OF UTAH AS:

A.1C = PROTECTED FOR DOMESTIC USE

B.3A = PROTECTED FOR COLD WATER GAME FISH AND AQUATIC LIFE

C.4 = PROTECTED FOR AGRICULTURE USES INCLUDING IRRIGATION AND STOCKWATERING

SURFACE SOIL/TAILINGS 1986

CONTAMINANT	MAXIMUM CONCENTRATION (REPORTED AS PARTS PER MILLION [PPM])		
	BACKGROUND^	ON-SITE	MEAN FOR WESTERN U.S.
ARSENIC	58	3,600	5.5
CADMIUM	17	80	0.2
LEAD	1,110	8,530	17
SELENIUM	6.7	<400	0.23
ZINC	1,570	6,360	55

^LEVELS REPORTED AS BACKGROUND MAY NOT BE TRUE BACKGROUND SINCE THEY WERE COLLECTED ADJACENT TO THE SITE AND IN AN AREA WITH A HISTORY OF MINING ACTIVITY.

CLEAN UP LEVELS FOR LEAD ARE AROUND 500-1000 PPM.

VOLUME OF TAILINGS ON SITE 2.7 MILLION TONS.

AIR 1986

CONTAMINANT	MAXIMUM CONCENTRATION (REPORTED AS MICROGRAMS PER CUBIC METER [UG/M3])	
	UPWIND	DOWNWIND
ARSENIC	0.002	0.093
CADMIUM	<0.010(b)	0.082(b)
LEAD	0.103	1.648
ZINC	0.091(c)	1.155(c)

NATIONAL AMBIENT AIR QUALITY STANDARD FOR LEAD IS 1.5 UG/M3 WHICH WAS EXCEEDED AT DOWNGRADIENT SAMPLING LOCATION.

ATSDR HEALTH ASSESSMENT

ONLY PRELIMINARY HEALTH ASSESSMENT HAS BEEN PERFORMED. MAJOR RECOMMENDATIONS INCLUDE:

-RESTRICT ACCESS;

-CONDUCT FURTHER G.W. AND SURFACE WATER SAMPLING INCLUDING OFF-SITE PRIVATE WELLS LOCATED WITHIN ONE MILE OF THE SITE;

-CONDUCT OFF-SITE SOIL SAMPLING TO CHARACTERIZE OFF-SITE MIGRATION OF CONTAMINANTS; AND

-ANALYZE EDIBLE PORTIONS OF TROUT FROM ADJACENT SILVER CREEK TO DETERMINE SUITABILITY FOR HUMAN CONSUMPTION.

MOBILITY OF CONTAMINANT(S):

CONTAMINANTS ARE IN DIRECT CONTACT WITH AIR, SURFACE WATER AND GROUNDWATER. WITHOUT FURTHER SITE CHARACTERIZATION THE EXTENT OR RATE OF OFF-SITE MIGRATION CANNOT BE SPECIFIED.

OTHER CONCERNS:

-CONTAINMENT DIKE IN POOR CONDITION WITH LEACHATE SEEPS OBSERVED

-TAILINGS DEPOSITS SUSCEPTIBLE TO WIND AND SURFACE WATER EROSION

-SITE NOT COMPLETELY FENCED

-MOST OF THE SITE IS IN A WETLAND AREA.

PAST EVENTS

-PRELIMINARY ASSESSMENT CONDUCTED BY THE STATE OF UTAH DECEMBER 1984.

-SITE INVESTIGATION REPORT FOR GROUNDWATER AND SURFACE WATER WAS FINALIZED BY THE FIT OCTOBER 1985.

-SITE INVESTIGATION REPORT FOR AIR SAMPLING WAS FINALIZED ON SEPTEMBER 1986 BY FIT.

-HRS PACKAGE WAS FINALIZED ON SEPTEMBER 1987.

-ADDITIONAL SURFACE WATER SAMPLING REPORT WAS FINALIZED BY FIT OCTOBER 1989.

THE STATE OF UTAH FEELS THAT THIS SITE HAS BEEN IN PA/SI PROCESS FOR THE LAST 6 YEARS. RI/FS START AT THIS SITE IS LONG OVERDUE. WE URGE THE PANEL TO GIVE THIS SITE A HIGH PRIORITY FOR RI/FS START IN 1991 AS SPECIFIED IN THE SCAP.